



# Regional Carbon Sequestration Partnership Annual Review

## Developing Protocols for Emissions Offsets from CCS

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# Summary

1. What is an “offset”?
2. Issues for geologic sequestration projects



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About Us

Membership

Carbon Registry

Carbon Accounting

News

## About Us

As the first private voluntary greenhouse gas registry in the U.S., the American Carbon Registry™ boasts time-tested integrity in carbon registry operations and technical services. The non-profit Registry is one of the largest and most respected online carbon registries in the U.S. voluntary and pre-compliance markets. **For more information.**



## Become a Founding Member

**Join the premier list of companies** who trust us with their carbon accounting and registry needs. Companies who become members now will be granted Founding Member status and be highlighted as **environmental champions.**

Registry members can:

- Report a corporate carbon footprint
- Register carbon offsets
- Record offset transactions
- Document offset retirements
- Contract carbon technical services

# What is an offset?



- A reduction in GHG emissions from an uncapped source
- 1 metric ton of CO<sub>2</sub>-e emission reductions
- Verified by independent 3<sup>rd</sup> party
- Surplus, real, additional, permanent, free from leakage, fungible and transferable
- Vintage year specified
- Goal: “a ton is a ton is a ton”

# A Well Designed GHG Registry...



- Provides a “gatekeeper” function screening poorly conceived projects
- Ensures measurable, verifiable, and comparable environmental results
- Provides a central, independent repository for credible information about emissions activities
- Serves as a ledger of all transactions across accounts



# Current Use of Carbon Capture & Storage for Offsets



- Five CCS Projects on ACR –all are Enhanced Oil Recovery (EOR) Projects
  - Blue Source Merit Energy, Wyoming
  - Blue Source PetroSource, Texas
  - Blue Source Pikes Peak, Texas
  - Anadarko Petroleum Monell, Wyoming
  - Anadarko Petroleum Salt Creek, Wyoming
- IPCC Special Report on CCS (2005) estimates “niche” markets of CO<sub>2</sub> at 360 MtCO<sub>2</sub>/yr

# ERTs Issued for EOR Projects



*All units in metric tons CO<sub>2</sub>-equivalent*

Total Tradable ERTs from EOR				12,017,206
Registry Activity				Tradable Balance
	2006	2007	2008	
Monell	364,909	340,713	368,322	209,035
Salt Creek	736,344	2,057,000	2,239,248	3,748,126
Merit**	874,554	817,249	370,975	4,371,930
PetroSource**	1,112,227	653,281	--	2,097.287
Pikes Peak**	193,302	504,139	509,831	1,590,828
<b>Total</b>	<b>3,281,336</b>	<b>4,372,382</b>	<b>3,488,376</b>	<b>12,017,206</b>

\*\* Additional tons issued in years prior to 2006.

# Key Issues for Geologic Sequestration (1)



- Ownership – clear, unique and uncontested
  - Pore space and CO<sub>2</sub>
  - State versus federal jurisdiction
  - Liability
- New Class VI rules
  - Site characterization
  - Waiver requirement to inject above lowermost USDW
  - Address large volumes, bouyancy, mobility, corrosivity
- Permanence
  - Assure no leaks
  - Rating Risk
  - Insurance



# Key Issues for Geologic Sequestration (2)



- Setting the project boundary
  - CO<sub>2</sub> plume, pressure wave
  - Site, field, strata
  - Overall process from source to sink
- Measurement and monitoring
  - Baseline and field characterization
  - Good practice requires measurement be conservative, transparent and thorough
  - Predictable reliability, resolution and sensitivity
  - Prefer performance-based approaches
- Additionality

# Additionality on ACR



- Exceed regulatory and legal requirements
- Go beyond common practice
- Overcome one of three implementation barriers:
  - Institutional
  - Financial
  - Technical

# Early Action?



- Should companies that act in advance of GHG regulatory requirements receive allowances or credits?
  - If so, how should “additionality” be determined?
- Are other regulatory requirements clear?
- Does technical consensus exist on current best practice for measurement and monitoring?
- Can insurance products be made available to assure permanence?

*The ability to assure project integrity is critical to any early action efforts*

## Contact info



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